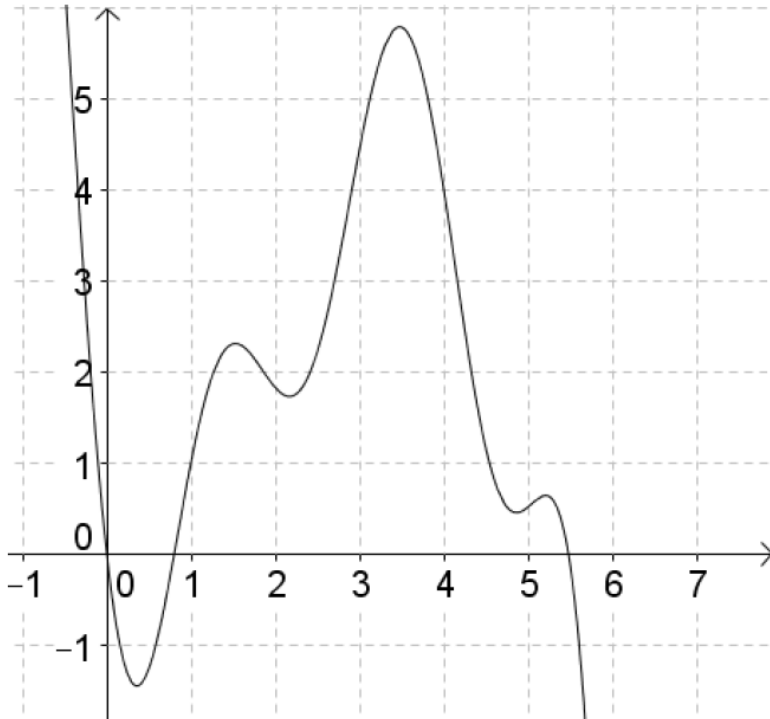


## Pre\_Calc Quiz Week 21

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

Show work: Probability Problem: UH 2014 Calculus Problems

21. The graph of  $f(x)$  is shown below. Give the number of values that satisfy the conclusion of the mean value theorem for derivatives on the interval  $[1,4]$ .

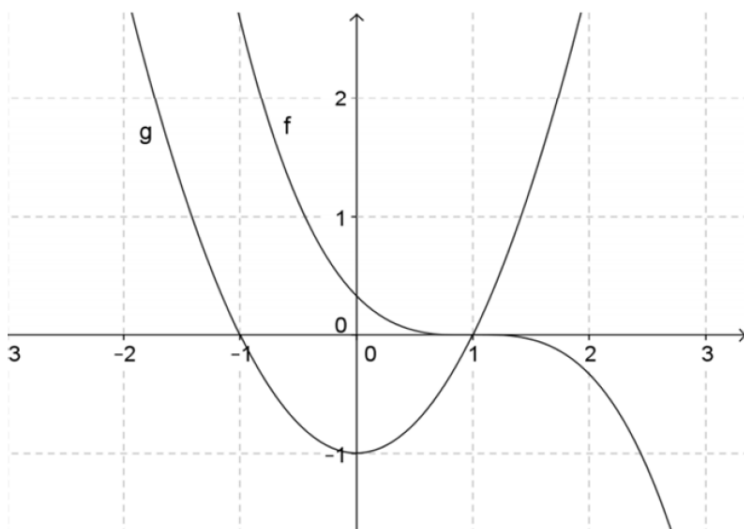


### Pre-Calculus Questions

- 1) Approximate the local max(s) and local min(s).
- 2) Lowest Degrees of  $f$ ?
- 3) Is  $f$ , odd, even, or neither?
- 4) Determine the concave up and concave down intervals for  $f$ .
- 5) Approximate the points of inflections for  $f$ .
- 6) Point(s) for which  $f'(x) = 0$ .

12. The graphs of  $f(x)$  and  $g(x)$  are given below. Give the vertical asymptote(s) of

$$H(x) = \frac{f(x)}{g(x)}$$



### Pre-Calculus Questions

- 7) Give the equations for  $g(x)$  and  $f(x)$
- 8) The vertical asymptote(s) of  $H(x)$
- 9) Is  $f$ , or  $g$ , odd, even, or neither?
- 10) Determine the multiplicity of each zero of  $f$  and  $g$ .
- 11) Approximate the points of inflections for  $f$ .
- 12) Point(s) for which  $f'(x) = 0$ .
- 13) Determine  $m'(x)$ , &  $m''(x)$ : if  $m(x) = \frac{1}{3}x^3 - \frac{5}{2}x^2 + 6x - 7$